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Scutacarus iharosi sp. n. and some new notes on the Tarsonemina fauna of Hungary

By

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ABSTRACT. Description of a new species (Scutacarus iharosi sp. n.) with a complementary description of S. tacensis Mahunka, 1964 is given. Some recent data about the distribution of the Tarsonemina species in the Bükk Mountains are presented.

In the course of the elaboration of some samples in the Bükk National Park (North Hungary) we found 27 Tarsonemina species. One species proved to be new to science, while some of the others have so far been known from a few localities only, so they are useful additions to our knowledge of the distribution of these species in Hungary.

The description of the new species necessitate the revision of the species-group of Scutacarus tacensis and the complementary description of these taxa.

LIST OF LOCALITIES

No. 4 = Bükk Mountains, Garadna valley, litter from Quercus forest, 15. June, 1982, leg. S. MAHUNKA.
No. 12 = Hármaskut, animal manure, 16. June, 1982., leg. S. MAHUNKA.
No. 26 = Nagyvisnyó, decayed tree. 23. September, 1981., leg. O. MERKL.
No. 27 = Hármaskut, litter from beech wood, 13. May, 1982., leg. M. MOLNÁR.
No. 29 = Miskolc, bat guano from a cave. 24. August, 1981., leg. E. HÁMORI.
No. 38 = Kerecsend, soil moss, 5. May, 1981, leg. P. HOLLÓ.
No. 39 = Nagyvisnyó, 850 m, soil moss, 5. May, 1981., leg. P. HOLLÓ.
No. 53 = Hármaskut, soil and moss from a rock crevice, 26. September, 1983., leg. K. SIN.
No. 61 = Hármaskut, decayed beech-tree with moss, 27. September, 1983., leg. K. SIN.
No. 73 = Lillafüred, Anna cave, moss, 19. April, 1984., leg. M. RAJCZY.

LIST OF SPECIES

PYGMEPHORIDAE Cross, 1965

Bakerdania bavarica (Krczal, 1959)
Locality: No. 29
Bakerdania exigua (Mahunka, 1969)
Locality: No. 61
Bakerdania zicsica Mahunka & Rack, 1977
Locality: No. 26
Pediculaster calcaratus (Mahunka, 1965)
Locality: No. 61
Pediculaster manicatus (Berlese, 1904)
Localities: Nos. 12, 61
Pediculaster mesembrinae Canestrini, 1880
Locality: No. 61
Petalomium chaetosum (Krczal, 1959)
Locality: No. 4
Pseudopygmephorus quadratus (Ewing, 1917)
Localities: Nos. 38, 61
Pygmephorus spinosus (Kramer, 1877)
Localities: Nos. 29, 73

MICRODISPIDAE Cross, 1965

Brennandania fagaea (Rack, 1965)
Locality: No. 4

Microdispus setosus (Evans, 1952)
Locality: No. 4

SCUTACARIDAE Oudemans, 1916

Diversipes exhamulatus (Michael, 1886)
Localities: Nos. 4, 27

Imparipes (I.) crassimerus (Mahunka, 1968)
Locality: No. 4

Scutacarus eucomus (Berlese, 1908)
Localities: Nos. 4, 53

Scutacarus hauseri Mahunka, 1977
Locality: No. 61

Scutacarus iharosi sp. n.
Locality: No. 4

Scutacarus longisetus bucephalus Balogh & Mahunka, 1963
Localities: Nos. 4, 61

Scutacarus longitarsus longitarsus (Berlese, 1905)
Locality: No. 61

Scutacarus pannonicus Willmann, 1951
Locality: No. 61

Scutacarus plumosus (Paoli, 1911)
Localities: Nos. 4, 61

Scutacarus quadrangularis (Paoli, 1911)
Locality: No. 4

Scutacarus subterraneus Oudemans, 1913
Locality: No. 29

Scutacarus tacensis Mahunka, 1964
Locality: No. 4

Scutacarus tackei suborbiculatus Rack, 1964
Localities: Nos. 4, 39, 61

Scutacarus tridentinus (Paoli, 1911)
Locality: No. 4

Scutacarus iharosi sp. n.

Measurements. - Length: 158-176 µm, width: 156-168 µm.

Dorsal side (Fig. 1): Clypeus wider than any other dorsal segment, its margin narrow. Both pairs of clypeal setae straight, setae c_1 longer than c_2, but both pairs shorter than setae of D-H segments. Ratio of the other setae: $ps_1 = ps_2 < d_1 < f_1 \cong h_1 \cong ps_3 < e_1 < h_2$. Setae f_1 and h_1 slightly dilate, their cilia longer than those of setae e_1 and h_1.

Ventral side (Fig. 2): Apodeme 2 weakly developed consisting of some arches, not reaching to lateral margin of anterior sternal plate. Lateral corner of sejugal margin well narrowed, straight. Surface of posterior sternal apodeme and ap. 4 characteristically roughened. Among epimeral setae 1a much stronger than 2a, their cilia stronger than those of other setae. Setae 3a shorter than 3b and arising in front of latter. Setae 4a and 4b very long arranged in a transversal line, setae 4a (54 µm) reaching to vulva, 4b (90 µm) reaching to posterior margin of body.

Legs: Claw of leg I (Fig. 4) small, its peduncle well separated. Setae d very long its tubercle longer than peduncle of claw. Solenidia ω_1 and ω_2 very long, ω_2 longer than ω_1. Setae dF phylliform, with serrate margin. Claws of legs II (Fig. 5) and III thick, their basal part conspicuously wide (Fig. 16). Dorsal spine of femur IV (Fig. 3) well developed. Tibiotarsus elongate (Fig. 12), more than twice as long as wide.

Material examined: Holotypus (1146-HT-85): Hungary, Bükk Mts., Garadna valley, litter from oak-forest, 15 Juni, 1982., leg. S. Mahunka, 2 paratypes from the same sample. Holotypus and 1 paratype (1146-PT-85) deposited in the Hungarian Natural History Museum, Budapest, 1 paratype in the Museum d'Histoire Naturelle Geneva.

Remarks: The new species belongs to the Scutacarus tacensis group, which may be well characterized by the elongate tibiotarsus of leg IV, the very long setae 4a-4b (4a longer than half of 4b) and the length and position of setae ps_1-ps_3. This group consists of the following species:

S. tacensis Mahunka, 1964
S. davadshamsi Mahunka, 1965
S. geomyi Mahunka, 1977
S. strinatii Cooremann, 1959*

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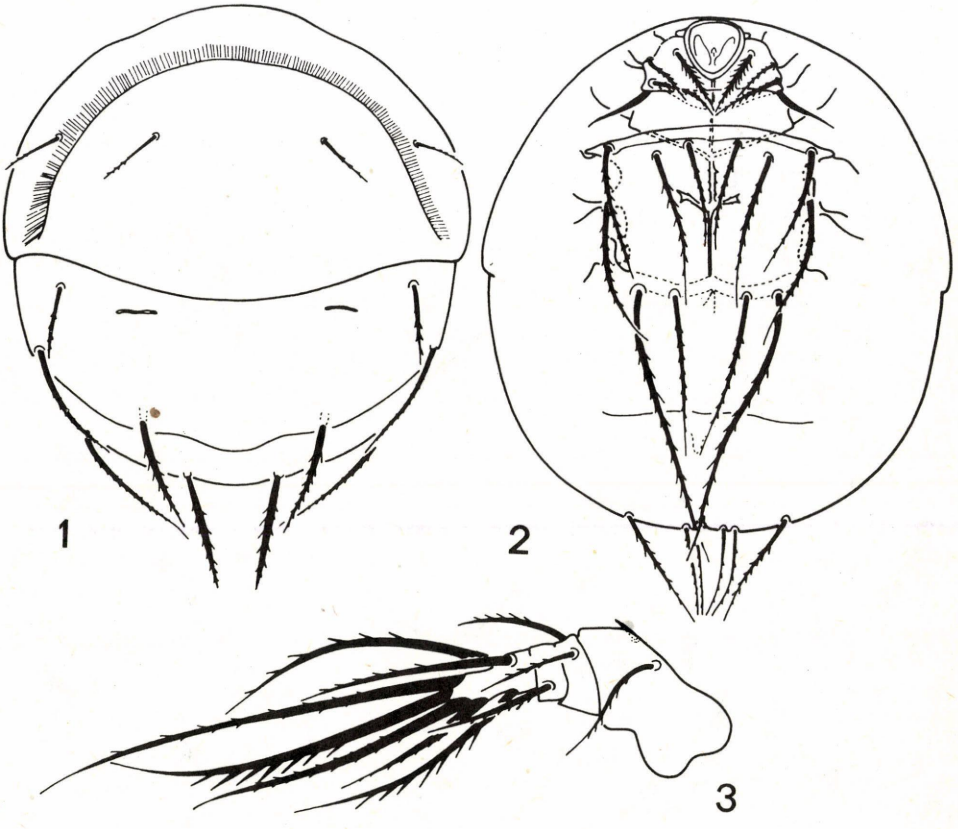
*The re-examination of the type of Scutacarus strinatii Cooremann, 1959 was also necessary, but the new species and the other species in this species goup are distinguished from it by the very short 3c setae in strinatii.

The new species is distinguished from them by the developed 4a-4b setae (originating in a transversal line in the new species) and the ratio of ps_1-ps_3 setae (ps_3 much longer than ps_1 and ps_2).

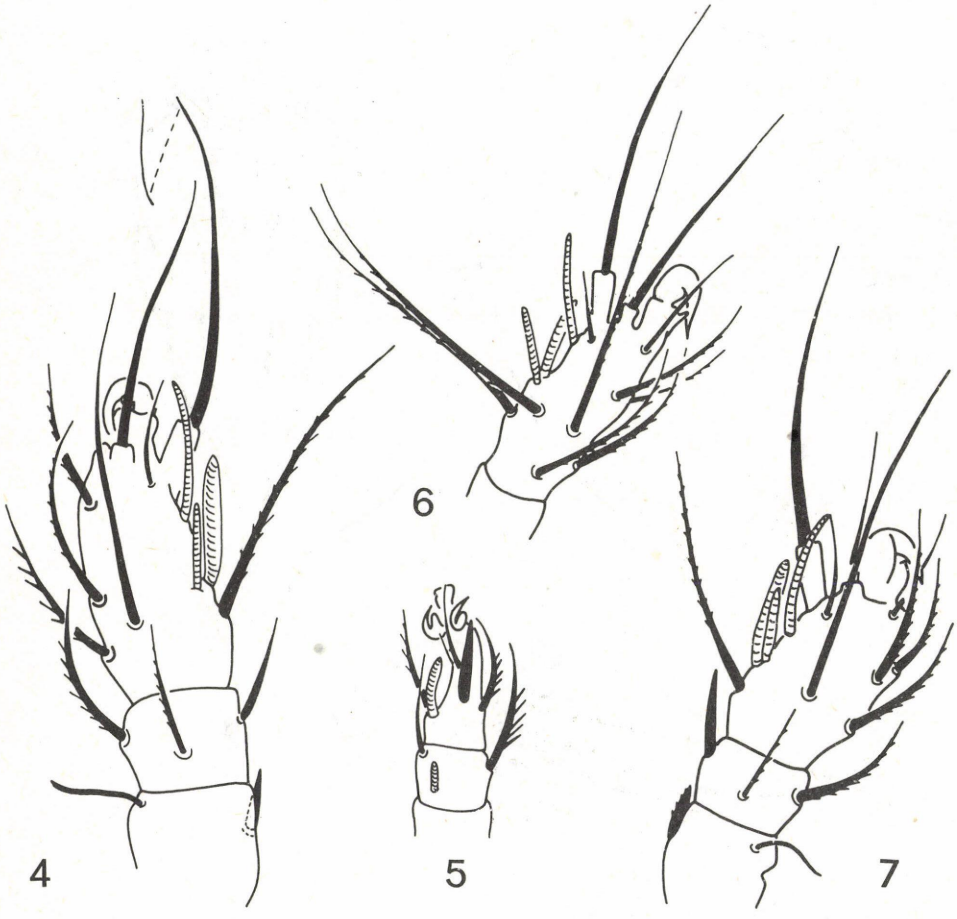
I dedicate the new species to Dr. Gy. IHAROS (Balatonfenyves, Hungary) the well known Tardigradologist, to commemorate his 75th birthday.



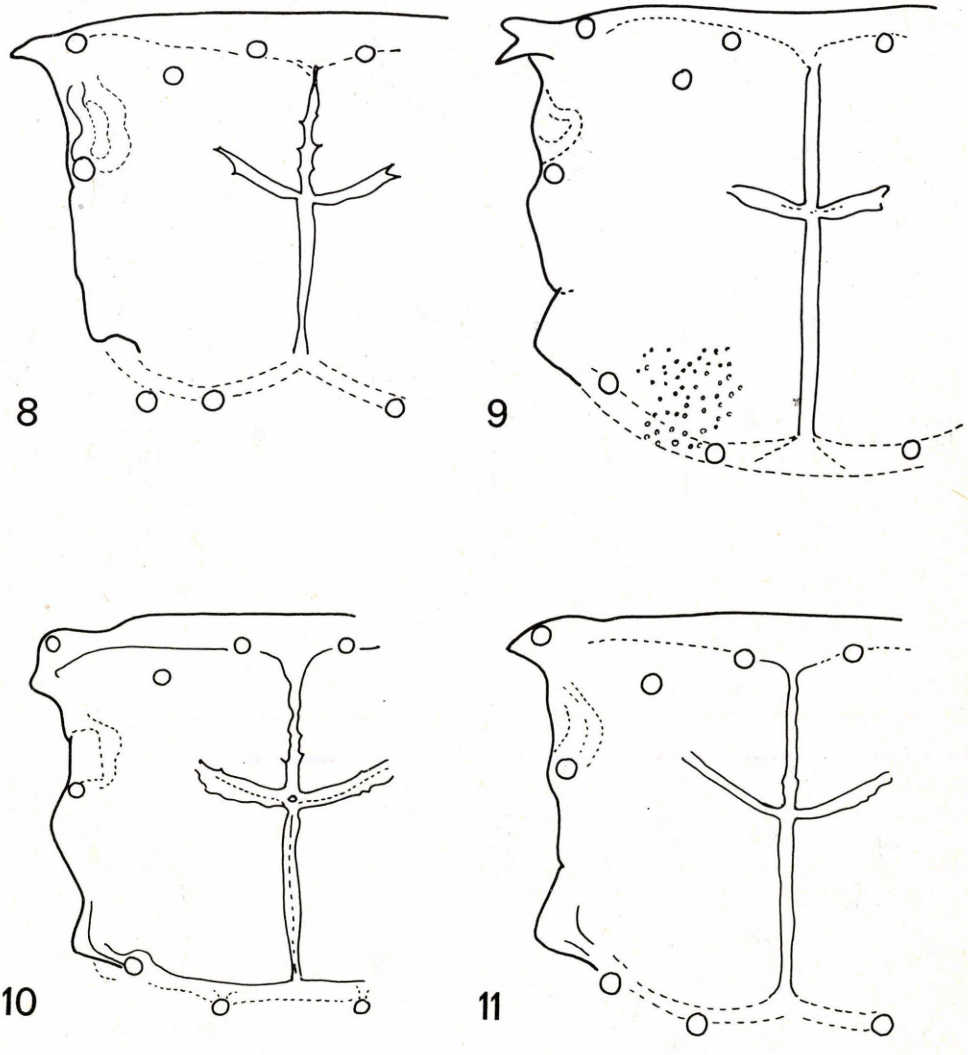
Figs 1-3. Scutacarus iharosi sp. n. - 1= dorsal side, 2= ventral side, 3= leg IV

The above description necessitated the re-examination of the type series of Scutacarus tacensis Mahunka, 1964, S. geomyi Mahunka, 1977 and S. davadshamsi Mahunka, 1965 and some characters (lateral corner of sejugal margin, leg I, form of claws, shape of tibiotarsus IV) were examined or re-examined.

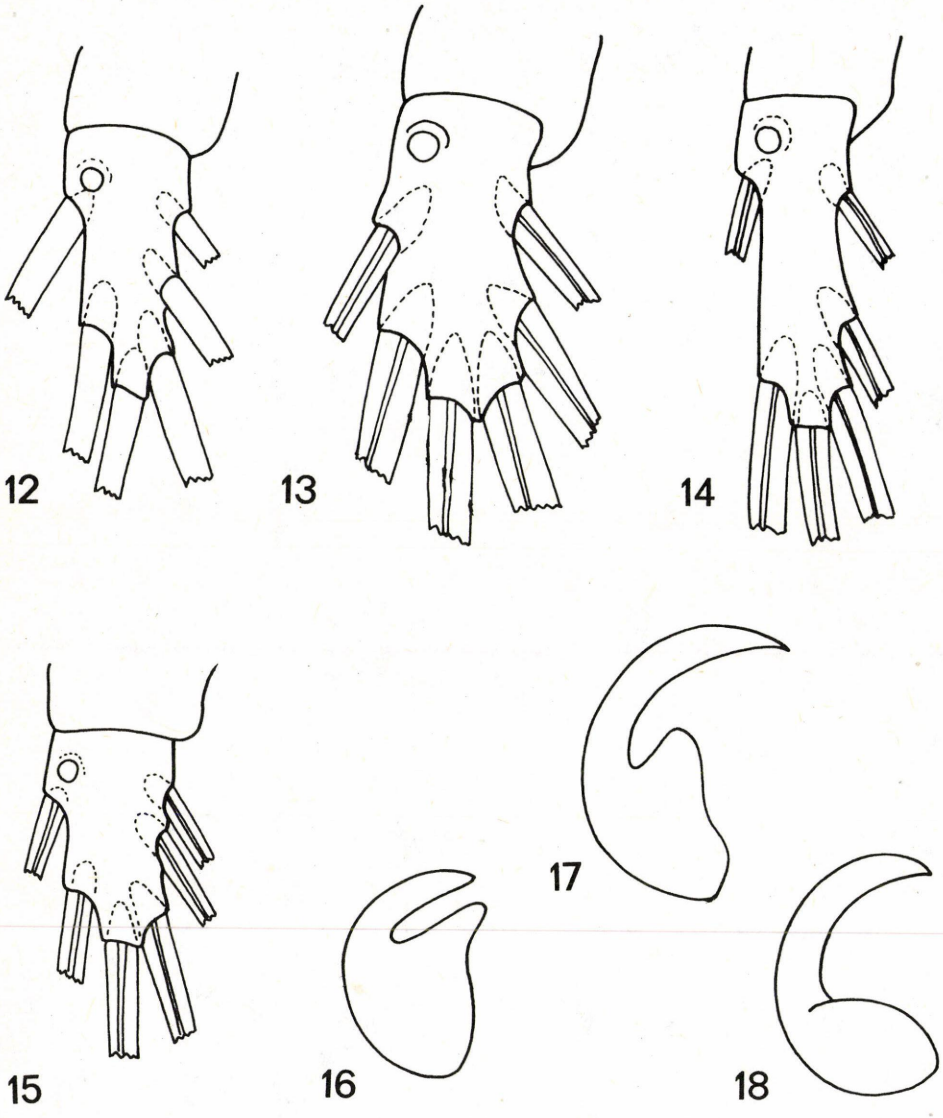
Lateral corner (LC) of the sejugal margin: This character was not or insufficiently examined in the genus Scutacarus Gros, 1845, however, it deserves greater attention since on this ground the four species are well distinguishable (Figs 8-11). The other listed characters are also very important, therefore, I give their figures (Figs 12-18).



Figs 4-5. Scutacarus iharosi sp.n. - 4= leg I, 5= leg II.- Fig.6. Scutacarus davadshamsi Mahunka, 1965 leg I. - Fig.7. Scutacarus tacensis Mahunka, 1964 leg I



Figs 8-11. Posterior sternal plate of Scutacarus spp. - 8= Scutacarus iharosi sp. n., 9= S. davadshamsi Mahunka, 1965, 10= S. geomyi Mahunka, 1977, 11= S. tacensis Mahunka, 1964



Figs 12-15. Tibiotarsus of leg IV of Scutacarus spp. - 12= S. iharosi sp.n., 13= S. davadshamsi Mahunka, 1965, 14= S. geomyi Mahunka, 1977, 15= S. tacensis Mahunka, 1964. - Figs 16-18. Claw of second leg of Scutacarus spp. - 16= S. iharosi, 17= S. geomyi, 18= S. tacensis

Scutacarus tacensis Mahunka, 1964

Dorsal side: The original description is acceptable, only a minute difference exists between the setae e and h_2; the latter being slightly longer than the former.

Ventral side: Anterior corner of posterior sternal plate as shown in Fig. 11. Setae poststernales externae (4b) originating not immediately next to legs IV.

Legs: Claw of leg I (Fig. 7) well developed. ω_1 solenidium much longer than the tubercle of seta d. Claws of leg II (Fig. 18) thin. Dorsal spine of femur of leg IV short, the shape of tibiotarsus of leg IV as shown in Fig. 15.

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